

Work Order ID 51835

September 4, 2009 9:57:22 AM



Page 1

Item ID: D6101-017

Accept



Setup Start



Revision ID: B

Stop



Item Name: Saddle Billet

Start Date: 9/04/09 Start Qty: 20.00



Cust Item ID:

Required Date: 9/16/09 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: *CL*

Date: *09/09/09* Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D6101	B

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: *10365*

- a) Description: Alluminum billet
- b) 6.350" x 6.250" x 2.250" thick (+0.030 / -0.000)
- c) Tolerance on all dimensions are +0.030"/-0.000"
- d) Grain direction along 6.350" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

PL 09-7-08

(20)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure material certification is attached

PL 9/5/24 (20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 51835

September 4, 2009 9:57:22 AM

Page 2

Item ID: D6101-017

Accept

Setup Start

Revision ID: B

Stop

Item Name: Saddle Billet

Start Date: 9/04/09 Start Qty: 20.00

Cust Item ID:

Required Date: 9/16/09 Req'd Qty: 20.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00

=> S09/01/24

LCN For
x20

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

130

Identify as per dwg & Stock Location: MAT42

0.00

JK 09/09/25

Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

09/09/28
09.09.28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

September 4, 2009 9:57:21 AM

Page 1

Work Order ID: 51835

Parent Item: D6101-017RevB

Parent Item Name: Saddle Billet



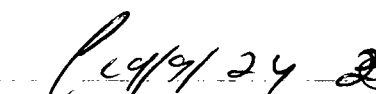
Comments:

Start Date: 9/04/09

Required Date: 9/16/09

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6101-017PRevB		Purchased	No			110	Each	0.0000	20.0000			
												
ALUM BILLET												

9/9/24 20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

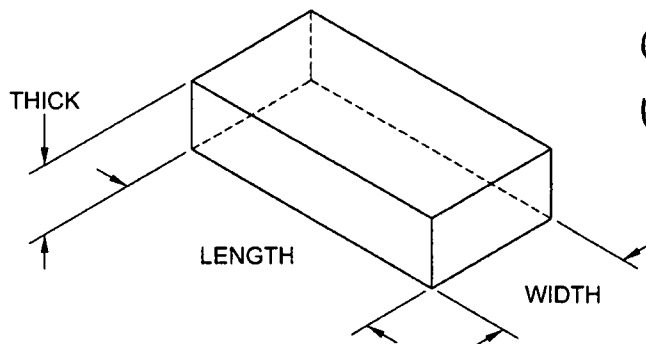
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING



0209109104
W10'. 51835

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/WP

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	<small>COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Pack Slip No:4116333

Ship From: Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms		Carrier	BOL No	Delivery No	
24-SEP-09	ORIGIN	Prepaid		LOCAL_FLEET	69346-5	4116333	

Shipment Details			Final Destination Branch - MON			
Order No	Line No	Item No	Description			
284475	2	24866.MO	2.2500.PL.7075.T7351.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 6.35")) X 6.35 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 6.35"))			
Purchase Order No		Part Number	Ordered Qty	Invoice Qty	Backorder Qty	
10365			20 PCS	20 PCS		
Details						
Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty (LBS)
	350451		20			181.22

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

This material has been received and inspected by:

Date:

ALCAN
ROLLED PRODUCTS

CERTIFIED TEST REPORT

RAVENSWOOD, WV 26164 USA



A M CASTLE & CO
3400 NO WOLF ROAD
FRANKLIN PARK IL
60131



A M CASTLE & CO
3400 NO WOLF ROAD
FRANKLIN PARK IL
60131

A M CASTLE A60705 1512 INCLUSION SERIAL#: 20070507A60705 PAGE 2 OF 2

CUSTOMER PURCHASE ORDER NO. & ITEM

01-84321

ALCAN ORDER NO.

113-581189

ALLOY CLAD. TEMPER GAUGE WIDTH LENGTH

7075 00 T7351 2.25000 48.500 144.500

ITEM ORDERED

DIST. AEROSPACE/COMM.
SPEC PLATE, SAWED MILL
CUSTOMER SPECIFICATION

AMS-QQ-A-250/12

ART NUMBER

B/L NUMBER

DATE SHIPPED

A60700

05/08/07

EIGHT SHIPPED NO. OF PIECES GOVT. CONTRACT NO.

12,960

8

CERTIFICATION

"ALCAN Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on ALCAN Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

ALCAN ROLLED PRODUCTS

P.O. BOX 68

RAVENSWOOD, WV 26164 USA

LaDonna B. Smith
LaDonna B. Smith - Quality Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS									
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX								
ACTUAL CHEMICAL COMPOSITION																		
50451	C		SI= 0.07	FE= 0.18	CU= 1.46	MN= 0.08	MG= 2.55	CR= 0.19	ZN= 5.44	TI= 0.02								
			OTHERS-EACH: .05		MAX. OTHERS TOTAL: .15		MAX. AL REMAINDER											
50452	C		SI= 0.07	FE= 0.16	CU= 1.40	MN= 0.06	MG= 2.45	CR= 0.21	ZN= 5.58	TI= 0.03								
			OTHERS-EACH: .05		MAX. OTHERS TOTAL: .15		MAX. AL REMAINDER											
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.																		
CHEMISTRY BY OES: ARKSPARK																		
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.																		
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.																		
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.																		
"END OF CERTIFICATION"																		
ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
SEE ACTUAL CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																		

ALCAN
ROLLED PRODUCTS

CERTIFIED TEST REPORT

RAVENSWOOD, WV 26164 USA



A M CASTLE & CO
 3400 NO WOLF ROAD
 FRANKLIN PARK IL
 60131



A M CASTLE & CO
 3400 NO WOLF ROAD
 FRANKLIN PARK IL
 60131

A M CASTLE A60705 1512 INCLUSION SERIAL#: 20070507A60705 PAGE 1 OF 2

CUSTOMER PURCHASE ORDER NO. & ITEM 01-84321				ALCAN ORDER NO. 113-581189	
ALLOY 7075	CLAD 00	TEMPER T7351	GUAGE 2.25000	WIDTH 48.500	LENGTH 144.500
ITEM ORDERED DIST. AEROSPACE/COMM. SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER		B/L NUMBER A60700		DATE SHIPPED 05/08/07	
WEIGHT SHIPPED 12,960		NO. OF PIECES 8		GOVT. CONTRACT NO.	

CERTIFICATION

"ALCAN Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on ALCAN Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

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			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
350451	LT	2	70.3	71.4	58.8	60.4	11.5	11.5	40.6	40.6									
350452	LT	2	***** T7351 69.7	70.4	57.9	59.4	***** 11.5	12.0	41.6	41.6									
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
AMS-STD-2154 100% SONIC MINUS DEAD ZONE CLASS A																			
ALSO CONFORMS TO AMS 4078F, ASTM B209-04																			
ALSO CONF TO ASTM B594, BSS 7055 CL A SONICS																			
CASTLE METALS CORP.																			
DATE RCVD 5/10/07																			
AC 24866																			
APPROVED BY [Signature]																			
ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS		
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.	
SEE ACTUAL	CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																			